SINGLE KU-BAND MULTI-POLARIZATION GALLIUM ARSENIDE TRANSMIT CHIP

Related Applications

This application is a divisional of pending U.S. application serial no. 10/014,555 filed on 14 December 2001.

Field of the Invention

The present invention generally relates to a multi-polarization active array transmit antenna.

Background of the Invention

Array transmit antenna technology is widely used in the area of satellite telecommunication, data transmission, radar systems and voice communication systems. Array antennas use electronic scanning technologies, such as time delay scanning, frequency scanning, or phase scanning to steer the transmitted beam. Use of electronic scanning allows an antenna system to achieve increased transmission data rates, instantaneous beam positioning, and the ability to operate in a multi-target mode. By using electronic scanning technology, an array transmit antenna can perform multiple functions that are otherwise performed by several separate antenna systems. Of the several electronic scanning technologies, phase scanning is the one used most widely in array antennas. Phase scanning is based on the principle that electro-magnetic energy received at a point in space from two or more closely-spaced radiating elements is at a maximum when the energy from each radiating element arrives at that point in phase. An array transmit antenna using the phase scanning technique is known as a "phased array antenna."